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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,112	10/21/2003	Eckhard Bez	DT-6624	5362
30377	7590	11/13/2006	EXAMINER	
DAVID TOREN, ESQ. ABELMAN FRAYNE & SCHWAB 666 THIRD AVENUE NEW YORK, NY 10017-5621			HAMO, PATRICK	
			ART UNIT	PAPER NUMBER
			3746	

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/690,112	BEZ ET AL.	
	Examiner	Art Unit	
	Patrick Hamo	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/08/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The indicated allowability of claims 3 and 7, now rewritten in independent form as claims 8 and 10, is withdrawn in view of the newly discovered reference to Zimmern, USPN 4,043,704. Rejections based on the newly cited reference follow.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins, USPN 2,246,932, in view of Braun, USPN 4,111,609, as applied in a prior Office action, and further in view of Zimmern, USPN 4,043,704.

Collins discloses the invention substantially as claimed, including the following: a first pump chamber (C¹) and a second pump chamber (C²), each having a suction side (9 for the first pump chamber, 9 and 24 for the second pump chamber) and an outlet side (11 for the second pump chamber, 11 and 23 for the first pump chamber); a piston (6) reciprocating in each of the pump chambers; a valve (19 for the second pump chamber, 21 and 28 for the first pump chamber) provided at the outlet side of each of the pump chambers; a first conduit (25) for communicating the outlet side of the first pump chamber with the suction side of the second pump chamber (column 4, lines 23-26); a second conduit (12) for communicating the suction side of the first pump chamber with the suction side of the second pump chamber; means (18, 28, 29) for selectively connecting the first conduit and the second conduit with the suction side of the second pump chamber; the selectively connecting means comprising first (28) and second (18)

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shut-off elements arranged in the first and second conduits, respectively; a discharge connection (11) at the outlet side of the first pump chamber and a third shut-off element (19) provided at the discharge connection. A shut-off element arranged in a conduit is interpreted in the broadest reasonable interpretation as any element that selectively stops flow through the conduit, including the check valves (18 and 19) used in Collins' reference.

Collins further discloses a method of operating by moving the selectively connecting means to a first position thereof in which the second conduit is connected with the suction side of the second pump chamber (column 3, lines 1-3), and the first conduit is disconnected from the suction side of the second pump chamber (column 4, lines 15-19), whereby gas entering through the suction side of the first pump chamber is pumped, in parallel, in the first pump chamber and the second pump chambers (column 3, lines 53-55) and is expelled through the respective valves provided at the outlet sides of the first pump chamber and the second pump chamber, respectively (see figure 1); and closing a discharge connection provided at the outlet side of the first pump chamber (column 4, lines 31-36) and moving the selectively connecting means to a second position thereof in which the second conduit is disconnected from the suction side of the second pump chamber (column 4, lines 31-36), and the first conduit is connected with the suction side of the second pump chamber (column 4, lines 23-26), whereby gas entering through the suction side of the first pump chamber is compressed in the first pump chamber, flows therefrom through the first conduit into the second pump

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chamber, is further compressed therein, and is expelled through the valve provided at the outlet side of the second pump chamber (column 4, lines 26-28, figure 2).

Collins does not disclose a housing in which are located the pump chambers, first and second conduits and selectively connecting means, or a three-way cock provided at an intersection of the first and second conduits.

However, Braun teaches a multistage fluid compressor embodying a housing (11) with fluid flow passageways cast therein (Abstract, lines 1-3) along with the pump apparatus (column 1, line 62 – column 2, line 34), eliminating numerous external piping and connections (Abstract, lines 5-9).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Collins' invention with that of Braun in order to eliminate the external piping and create a safer and more aesthetically pleasing pumping unit (Abstract, lines 5-9).

Zimmern teaches a pump adaptable to series or parallel operation by means of a three-way valve (column 5, lines 16-21) as a means to alternate the pump between serial or parallel operation (column 1, lines 50-58) by connecting and disconnecting pump chambers 104a and 104b via conduits 8a, 9, and 11, alternating between the two operating modes in order to retain high thermodynamic efficiency (column 1, lines 37-41).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the Collins i.v.o. Braun apparatus with

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Zimmern's invention to retain high thermodynamic efficiency at high and low deliveries (column 1, lines 62-66).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Hamo whose telephone number is 571-272-3492. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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**EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER**